

## **Nothing ventured, nothing gained. The birth of the risk economy, 1880s–1990s**

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*This paper does not present results of a research project, but conceptualizes one. Thus the text is not intended for publication in a journal, but for illustration in acquiring research grants and, most importantly, to get feedback on the concept of the proposed study. So feel free to comment on the paper, but please do not quote from it.*

### **Introduction: Risk as a core principle of modern economies**

Economic acting always means facing uncertainty. In traditional agricultural societies, uncertainty is given mainly in the form of hazards – the hazard of wars, the hazard of epidemics (both of which threatened to disrupt economic relations at least temporarily), and especially the hazard of crop failures. These types of uncertainty do not stem from economic actions, they are subject to fate. Those hazards are not banned in modern industrial societies, but they are by far less immanent. Now the dominating kind of uncertainty arises out of decision making, it can be described as venture or risk.

More precisely, in this paper the term economic risk shall denote the uncertainty in situations of decision making, in which there is an aim to minimize capital loss or maximize capital gain. Whether an option to choose is an optimal one with respect to these aims, is uncertain – there is only a certain probability for or against it. Seen the other way round, risks are at least somewhat ‘calculable’ and in this way to a certain degree controllable, not only a matter of fate. This means that whereas hazards, as fateful uncertainties beyond subjective control, are always perceived as something negative, risks as uncertainties arising out of manageable human action also bear an element of chance.<sup>1</sup> Modern economic agents are constantly torn between avoiding or minimizing risks (evaluated negatively) and looking for and taking risks (considered promising). So at the heart of industrial self-sustained growth is pervasive risk-taking<sup>2</sup>: “Nothing ventured, nothing gained.”

Most actors in a pre-industrial economy, except for bankers and long-distance trade merchants, are neither under the necessity nor have the opportunity to make decisions which involve taking risks. This is due to the nature of the economic system: Demand in traditional societies is fairly static and inflexible, as it focuses by and large on vital goods. Most goods are hardly or only moderately processed, so supply is basically determined by the waywardness of nature. Low social mobility and the lack of investment capital limit the agents’ possibilities to change their economic behavior. In modern industrial economies, on the contrary, ever growing portions of demand are devoted to dispensable goods liable to fast changing fashion. The steady change of highly processed goods enforces perpetual decision-taking. The industrially produced supply is not so much dependent on the contingency of nature, as on the doings of other actors; it is thus determined by deliberate entrepreneurial decisions in complex action frameworks.

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1 Bonß, Wolfgang, *Vom Risiko. Unsicherheit und Ungewissheit in der Moderne*, Hamburg 1995, p. 53. On the theory of risk see also: Luhmann, Niklas, *Risk: A Sociological Theory*, Berlin 1993.

2 The classic elaboration of this insight is Knight, Frank H., *Risk, uncertainty and profit*, Boston 1921.

Modern enterprises see these action frameworks in many respects as market relations. Unlike preindustrial craftsmen they tend to pursue the mass production of a wider variety of products, which means a parallel engagement on several supplying and buying markets. Also the dependency on labor markets has to be taken into account<sup>3</sup>, but first and foremost modern enterprises as capital intensive organizations are firmly embedded into financial markets. The assessment of the situation in all these markets has a direct influence on business processes. In addition, fundamental entrepreneurial decisions, i.e. about investments and the shaping of the enterprise are based on the development of the economy as a whole.

Whether considering separate markets or the economy as a whole, in dealing with economic risks the attention commonly lies upon quantitative variables such as prices, exchange or interest rates, market volumes, and also upon indexes which reflect economic developments and make them accessible to econometric modeling and mathematical treatment. Thus it is emblematic that economic risks are frequently interpreted as uncertainties about the future course of economic time series. Learning to cope with risks in such a way is one of the features of modernity<sup>4</sup>, and it is in the centre of the project proposed in this paper. The main question is: How did the institutions for, practices of and reflections on dealing with the uncertainty about future market and business developments change from the 1880s into the 1990s?

### **Main fields of the proposed study**

#### *Background: Contemporary views on the nature of the economic system*

An indispensable framework for the handling of market risk is given by the contemporary opinions on the degree to which market developments can be kept calculable and free of crisis at all – either qua construction of the market or by its governance.

An illustrative example for attempts to eliminate market risk already in the construction of the market is the agenda to keep exchange rates stable by a suitable global currency system. This agenda was pursued from the age of the classical gold standard to the era of Bretton Woods. Whereas the idea lost its attraction in the last decades of the 20<sup>th</sup> century, the willingness to take governance measures as favored in Keynesianism or even to introduce planning into the economy increased in the wake of the Great Depression<sup>5</sup>.

Depending on whom one considers responsible to deal with market risks (either superordinated authorities or the individual economic agent himself) and how these risks are perceived (either as a consequence of preventable disturbances in an economic system which is principally in an equilib-

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3 However, the dependency on labor markets is of a different kind than those on commodity or financial markets, as pricing works differently: Wages and salaries are set for comparatively long stretches of time, either in individual employment negotiations or in collective tariff agreements.

4 Hacking, Ian, *The Taming of Chance*, Cambridge 1990.

5 On Germany: Nützenadel, Alexander, *Stunde der Ökonomen. Wissenschaft, Politik und Expertenkultur in der Bundesrepublik 1949–1974*, Göttingen 2005.

rium or as inevitable problems of a principally instable system), there are different approaches to tackle the problem of risk management in economic theory and practice. Discontent about the functioning of markets may result in economic actors to either govern the market themselves by cartels or other accords, or to even dismiss the market at all by choosing alternative forms of transactions like internalizing them into companies by mergers and acquisitions. Provided that the uncertainty about market developments is considered an acceptable problem, there are two intertwined strategies to handle market risk by the economic agents. On the one hand, instruments can be worked out to predict the development of prices, rates and indexes. On the other hand, instruments to insure against undesirable developments and thus manage risks are convenient.

Forecasting as well as risk management measures, their emergence, their application, the contemporary reflection on them, and the opportunities and practices arising from their existence are at the center of the proposed study.

### *Economic Forecasting*

In the second half of the 19th century, industrialization and the emergence of a modern economy entailed a new kind and a new perception of economic ups and downs. There are publications from pre-industrial times that seek to discover regularities in price movements<sup>6</sup>, but only at the beginning of the 20<sup>th</sup> century emerged a wide-spread notion that ups and downs of the economy should not only be connected to actual events and historical circumstances, but rather seen as a repeating pattern inherent to modern economies, as a so called business cycle.

The key publication in the booming field of business cycle research was written by the US economist Wesley C. Mitchell, first published in 1913.<sup>7</sup> He and his colleagues contemplated the possibility to construct current indexes to describe and predict the business climate<sup>8</sup>, an idea which was realized by the *Harvard University Committee of Economic Research*. From 1919 onwards, it published the Harvard business barometer. In Germany, the *Frankfurter Zeitung* followed suit and began to print a supplement called “Wirtschaftskurve”, with indexes on the current development of the economy and the standards of living, in 1922.

Frankfurt, next to Berlin, became a center of German business cycle research. In Berlin, the *Institut für Konjunkturforschung* (IfK) was established in 1925 at the suggestion of Ernst Wagemann, president of the German statistical agency (*Statistisches Reichsamt*), who also took over the direction of the IfK.<sup>9</sup> In Frankfurt, the competing *Gesellschaft für Konjunkturforschung* emerged around

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6 To cite an interesting German example: Unger, Johann Friedrich, *Von der Ordnung der Fruchtpreise, und deren Einflüsse in die wichtigsten Angelegenheiten des menschlichen Lebens*, Göttingen 1752.

7 Wesley C. Mitchell, *Business Cycles*, Berkeley/CA 1913.

8 Warren M. Persons, *Construction of a Business Barometer Based upon Annual Data*, in: *American Economic Review* 6, 1916, pp. 739–769.

9 Rolf Krengel, *Das Deutsche Institut für Wirtschaftsforschung (Institut für Konjunkturforschung) 1925–1979*, Berlin 1986; Albert Wissler, *Ernst Wagemann. Begründer der empirischen Konjunkturforschung in Deutschland*, Berlin 1954.

Eugen Altschul and some of those involved in creating the “Wirtschaftskurve”. Altschul kept close relations with the US business cycle researchers around Mitchell<sup>10</sup>, who had succeeded in installing their own institute in 1920: Until today, the *National Bureau of Economic Research* (NBER)<sup>11</sup> is the biggest economics research organization of the US.

As the crash of 1929 and the Great depression had not been predicted, the practice of economic forecasting faced a fundamental crisis<sup>12</sup>, which however set off a new and improved grounding of theories and methods. After World War II, distinct economic departments for business and market forecasting were established in governmental machineries, institutions like the *International Monetary Fond* (IMF) or the OECD, large enterprises and banks. In the 1960s, a private sector forecasting industry emerged in the US<sup>13</sup>. The most important companies were WEFA (*Wharton Econometric Forecasting Associates*, founded 1963), DRI (*Data Resources Inc.*, founded 1966, merged with WEFA to *Global Insight Inc.* in 2001) and *Chase Econometrics* (founded 1970, acquired by WEFA in 1987). Regarding stock market predictions, there are also numberless newsletters offered for subscription by service agencies and stock exchange gurus, some dating back in the time before World War II – the renowned company *Value Line Inc.* in New York for example has been in business since 1931.

### *Risk management*

The simplest way to avoid the uncertainty of the market development is the use of so called forward contracts or just “forwards”, in which seller and buyer agree now on the conditions of a future business. From the historical point of view, futures were first used in the agricultural trade. Producers and buyers of agricultural goods determined prices and amounts of deliveries a long time before the harvest started.

To lower transaction cost, such agreements were increasingly standardized since the middle of the 19th century. Always made out to the same well defined quality and the same fixed quantity, these contracts became tradable on distinct future exchanges.<sup>14</sup> To distinguish between forward agreements traded outside exchange (in modern terms: OTC – „over the counter“), the standardized contracts traded at an exchange are called “futures”. Spot markets, at which goods changed

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10 Bernd Kulla, *Die Anfänge der empirischen Konjunkturforschung in Deutschland, 1925–1933*, Berlin 1996, S. 167–180. Altschul took care of the first German edition of Mitchell’s benchmark work. In the face of the National Socialists’ hostile attitude both towards his person and towards business cycle research in general, Altschul migrated to the US in 1933. He found a new scientific home at the NBER.

11 Solomon Fabricant, *Toward a Firmer Basis of Economic Policy. The Founding of the National Bureau of Economic Research*, Cambridge/MA 1984.

12 See for instance: Cowles, Alfred, *Can Stock Market Forecasters Forecast?*, in: *Econometrica* 1/3, 1933, pp. 309-324.

13 Sherden, William A., *The Fortune Sellers. The Big Business of Buying and Selling Predictions*, New York 1988, pp. 55-124.

14 A predecessor is the Osaka rice market of the 17<sup>th</sup> century. – A well-established introduction into the subject is Hull, John, *Options, Futures, and Other Derivatives*, 7<sup>th</sup> edition, Upper Saddle River/NJ 2008.

hands instantly, were complemented by according futures markets, on which contracts or, to use the generic term, derivatives were traded. The defining feature of derivatives is that their price is determined in relation to an underlying variable like, in the basic form, a spot market price.

Although the price developments on a spot and the according future market are interconnected, in practice a complete separation between trading a good and trading the according derivate can be achieved. Instead of fulfilling the contract at the settlement date by delivering the specified amount of the good, it is possible to make a cash-settlement, i.e. the difference between actual market price and the price specified in the contract is transferred between the buyer and the seller of the contract. Thus, participation in futures markets is not confined to those trading in the underlying good. They, on the contrary, play a minor role as derivative markets quickly became a playground of the financial world.

In finance, derivatives are an attractive instrument to ease transactions in any type of market. Consequently, commodity futures were joined by securities futures, by futures on interest and exchange rates, futures on other derivatives, and even – leaving markets – on the weather. In all these fields, market risk itself became tradable. By constructing derivatives based on stock indexes, business climate indicators and other indexes, an analogous treatment of risks arising from the uncertainty about economic developments in general was enabled. In the course of the 20<sup>th</sup> century, instruments created for making agricultural commodity markets a more calculable terrain have turned into universal financial instruments for a general corporate risk management.

Even though there are some studies on the history of financial economics<sup>15</sup> and informative popular books<sup>16</sup> on the subject, an encompassing treatment by economic historians of the theory and practice of financial risk management and the discourses about it is still a desideratum. This point is made by the renowned financial historian Richard Sylla, whilst stressing the key role of the subject for the modern economy: “In the work of financial historians[, the] facilities [that] financial systems provide for managing risks are rather neglected in comparison with their functions of mobilizing and allocating capital. [...] I am not sure that the mobilization and efficient allocation of capital are the main contributions of modern financial systems to economic growth. The risk management facilities afforded us by our financial systems, which are just beginning to be discussed by economic and financial historians [...] are equally if not more important parts of the contribution of financial systems to economic modernization.”<sup>17</sup>

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15 Harrison, Paul, *A History of an Intellectual Arbitrage, The Evolution of Financial Economics*, in: *History of political economy* 29, 1997, pp. 172-190; Poitras, Geoffrey, *The early history of financial economics, 1478–1776. From commercial arithmetic to life annuities and joint stocks*, Cheltenham 2000, especially pp. 267-417; Stabile, Donald R., *Forerunners of modern financial economics. A random walk in the history of economic thought*, Cheltenham 2005; Poitras, Geoffrey, *Pioneers of financial economics*, 2 vol., Cheltenham 2006.

16 Bernstein, Peter L., *Capital ideas. The improbable origins of modern Wall Street*, New York 1992; Bernstein, Peter L., *Capital ideas evolving*, Hoboken/NJ 2007.

17 Sylla, Richard E., *Financial systems, risk management, and entrepreneurship. Historical perspectives*, in: *Japan and the world economy* 15/4, 2003, pp. 447-458, here: pp. 455-456.

## Levels of investigation

It is intended to merge the above described fields of the projected study in a chronological narration, and to investigate them at different levels: the institutions and practices of economic forecasting and risk management, the scientific and professional discourses, and finally the public discourses. As has already been hinted, the focus will be on the US and Germany, but for different parts of the story examples and developments from other countries shall be drawn on as well.

### *Institutions and practices*

In the field of risk management, a first group of relevant institutions is made up of the infrastructural organizations of the derivatives markets, i.e. the futures exchanges. The most important ones in the US are the Chicago Mercantile Exchange (CME) and the Chicago Board of Trade (CBOT), which have recently merged into the Chicago Mercantile Exchange (CME), and the New York Mercantile Exchange (NYMEX). For Germany the situation is less clearly laid out, as interdictions of futures trading – to some degree at the turn of the century, then properly in and shortly after World War I, and most importantly between the Great Depression and the 1970s – have caused institutional discontinuities. Actually most of the globally important futures exchanges of today are creations from the last three decades of the 20<sup>th</sup> century. Except for the US and Germany, interesting examples of futures exchanges for any part of the period from the 1880s to the 1990s might be found at the City of London and maybe even more in the case of the traditional Japanese futures exchanges. Furthermore, the study of specialized exchanges for certain commodities like for instance the *Sydney Greasy Wool Futures Exchange* (later *Sydney Futures Exchange* (SFE), 2006 merged with the *Australian Stock Exchange*) could be illustrative.

Besides the infrastructure of the derivatives markets, also the intermediaries that specialized in using this infrastructure are of high interest, especially those members of the financial services industry that offer investment management. Among the biggest specialized companies today, *The Capital Group Companies* (founded 1931), *Morgan Stanley* (1935) and *Fidelity Investments* (1946) can be counted among those who have been in business for a fairly substantial period of time.

For the field of economic forecasting as well the financial services industry might be a good place to look at. Besides the above mentioned predecessors of *Global Insight* and newsletter providers like *Value Line*, also those financial service companies could be worth a look at who, like *Standard & Poor's* or *Moody's*, provide a broad range of services including risk management and market analysis. Here in particular it shows that the fields of forecasting and risk management are effectively dovetailed. It remains to be seen, however, if the often recent and often secretive businesses of the financial services industry will be accessible to the curiosity of the business historian, or if the analysis will become more a survey of the branch. In any case the study shall also look beyond the private sector and onto German and US economic research institutes and international forecast providers like the IMF and the OECD.

For all institutions that, in the end, can really be studied in more detail, the focus lies on the one hand on the mechanisms and practices of handling risk which were created by them and incorporated in them, and on the other hand on the groups of actors involved – their background, their function, and their genuine understanding of economic risk.

### *Scientific and specialist discourse*

The scientific and professional treatment of the theoretical problems of economic risk can be captured by exploring contemporary text books and key publications. Three aspects of this kind of discourses will be distinguished. The first one, ranging back to the end of the 20<sup>th</sup> century, is business cycle research, which was popular and in high esteem especially in the first third of the 20<sup>th</sup> century.

The scientific engagement with financial markets in general and derivatives markets in particular, as the second aspect, did only gain momentum in the 1950s and 1960s. The main discipline that emerged from that is (neoclassical) financial economics. Among the central concepts are portfolio theory, the capital asset pricing model, and the much debated efficient market hypothesis, which came under fire from the field of behavioral finance. As a more general result of thinking along such lines, a new perspective on the company evolved. A corporation was thought of as an apparatus of capital inflows and outflows that had to be optimized in order to maximize 'shareholder value'. This concept is also important for the third investigation level of the proposed study, the public discourses.

Beyond financial economies there is also a more fundamental question regarding the role of futures markets in the pricing of the according spot markets. This question had been raised already in the stage of broadly establishing futures trading in the 1880s, and it has not been finally settled until today. In principle, spot market price and futures market price should co-evolute, as a digression of the prices allows for risk-free arbitrage which would result in price convergence. So theoretically, futures markets fulfill a vital role in pricing goods, as here the different expectations and information of different actors on the future development of the spot market are converted into tangible transactions with derivative contracts, and are thus explicated for everyone. Hence, futures exchanges would not only allow for risk management, but would increase the transparency and efficiency of spot markets. This provides an argument for the indispensability of futures markets that is brought forward by those who are interested in having them. There are, on the other hand, signs that the connection between the two market prices is far less strong than theoretically predicted. It might be useful to investigate into this problem as part of the proposed study.

The third and final aspect of scientific and professional discourses on handling economic risk is the development of mathematical methods to model and analyze economic time series. It will be examined if the change in mathematical concepts about stochastic processes and the change in the theoretical and practical handling of economic risks are in any way interrelated.

*Public discourse*

To a good part unconnected to the scientific and professional debates, public discourses can be traced in press articles, reports of parliamentary committees, and contemporary monographs intended to take part in an ongoing debate. A prerequisite for such discourses is the special nature of risk as the dominant kind of uncertainty in the modern economy. Market risks are for the main part induced by the aggregate result of individual economic actions, and less by external shocks as it was the case for pre-industrial economies with a focus on agriculture. Modern economies generate risk out of themselves, so to speak. In this respect, they are autopoietic systems. As a consequence, economic crises are less perceived as fateful and inevitable events and instead attributed to actions of concrete economic agents.

A main aspect of public discourses is the problem of speculation<sup>18</sup>. In increasing the transferability of risk, derivatives markets allow not only for hedging strategies, but also open up an enormous potential to speculate. It is possible to generate derivatives for a high amount of the underlying asset with only a fraction of the capital needed to actually buy the said amount of the asset. Therefore there exists a leverage effect, by which price movements that change the value of the underlying asset are magnified and change the derivatives' value disproportionately. This makes derivatives a very effective means for speculation. Already in the 1880s, the nominal size of the futures markets was much larger than the size of the spot markets. Besides buyers and sellers of the underlying commodities, also speculative investors took part in the futures markets. This speculation was heavily debated, in the US as well as in Germany<sup>19</sup> and other countries. As already mentioned earlier, outside the US futures trading was banned at different times. The debate about the problem of speculation continues until the present day, as becomes evident in the discussions concerning the character of hedge funds and those about the role of futures market speculation in the present rise of the prices of oil and agricultural commodities.

However, such discussions about 'casino capitalism', just as disputes about the shareholder value concept, are just a part of the discourse on the modern economic system as a risk economy. In the proposed study, this discourse shall be considered more comprehensively and on a firmer empirical basis.

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18 Galbraith, John Kenneth, *A short history of financial euphoria*, Knoxville/TN 1992; Chancellor, Edward, *Devil take the hindmost. A history of financial speculation*, London 2000; Stäheli, Urs, *Spektakuläre Spekulation. Das Populäre der Ökonomie*, Frankfurt 2007.

19 See for instance Hatch, William Henry (ed.), *Fictitious dealing in agricultural products. Testimony taken before the Committee on Agriculture during a consideration of bills Nos. 392, 2699, and 3870, restricting and taxing dealers in "futures" and "options" in agricultural products, and for other purposes*, Washington 1892; *Börsen-Enquête-Kommission* (ed.), *7 Gutachten über Terminhandel, insbesondere in Kammzeug und Baumwolle*, Berlin 1893.